AMENDMENTS TO THE CLAIMS

A listing of all claims and their current status in accordance with 37 C.F.R. § 1.121(c) is provided below.

1. (Currently amended) A process for producing solid polymer particles, the process comprising:

polymerizing, in a loop reaction zone, at least one monomer to produce a fluid slurry comprising solid polymer particles in a liquid medium;

withdrawing <u>substantially continuously</u> a portion of the slurry, comprising withdrawn liquid medium and withdrawn solid polymer particles, as an intermediate product of the process;

passing the intermediate product through a heated conduit, producing a concentrated intermediate product and a vapor; and separating the vapor from the concentrated intermediate product by centrifugal

force in a cyclone;

passing the concentrated intermediate product to a receiving zone.

2. (Original) The process of claim 1 wherein at least about 90% of the vapor is separated from the concentrated intermediate product in the cyclone and passed to a filter zone.

- 3. (Original) The process of claim 1 wherein at least about 95% of the vapor is separated from the concentrated intermediate product in the cyclone and passed to a filter zone.
- 4. (Original) The process of claim 1 wherein at least about 99% of the vapor is separated from the concentrated intermediate product in the cyclone and passed to a filter zone.
- 5. (Original) The process of claim 1 wherein at least about 99.9% of the vapor is separated from the concentrated intermediate product in the cyclone and passed to a filter zone.
- 6. (Original) The process of claim 1 wherein at least about 99.99% of the vapor is separated from the concentrated intermediate product in the cyclone and passed to a filter zone.
 - 7. (Original) The process of claim 1 further comprising: passing the separated vapor from the cyclone to a filter; and filtering fine polymer particles from the separated vapor.
- 8. (Original) The process of claim 1 wherein at least about 90% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.

- 9. (Original) The process of claim 1 wherein at least about 95% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.
- 10. (Original) The process of claim 1 wherein at least about 99% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.
- 11. (Original) The process of claim 1 wherein at least about 99.9% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.
- 12. (Original) The process of claim 1 wherein at least about 99.99% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.
- 13. (Original) The process of claim 1 wherein at least about 99.999% of the polymer solids in the intermediate product are separated from the withdrawn medium in the cyclone.
 - 14. (Cancelled)

- 15. (Original) The process of claim 1, further comprising the step of maintaining a concentration of solid polymer particles in the slurry in the zone of greater than 40 weight percent.
- 16. (Original) The process of claim 1, wherein the separated vaporized diluent from the cyclone is condensed without compression by heat exchange with a fluid having temperature within the range of about 32 degrees F to about 200 degrees F.
- 17. (Currently amended) The process of claim 1, comprising passing the concentrated intermediate product to a receiving zone, wherein the volume of the receiving zone is in the range of about 1000 to about 20,000 cubic feet.
- 18. (Currently amended) The process of claim 1, further comprising:

 passing the concentrated intermediate product to a receiving zone; and

 the step of holding the polymer solids in the receiving zone for a polymer solids
 residence time sufficient to remove substantially all the unentrained diluent.
- 19. (Currently amended) A process according to claim 21 18 wherein the polymer solids residence time is from about 10 seconds to about 30 minutes.
- 20. (Currently amended) A process according to claim 21 18 wherein the polymer solids residence time is from about 30 to about 120 minutes.

- 21-27. (cancelled).
- 28. (new) A process, comprising:
- polymerizing at least one monomer in a reactor to produce a slurry comprising solid polymer particles and a liquid;
- withdrawing substantially continuously via a valve a discharge slurry from the reactor, the discharge slurry comprising withdrawn solid polymer particles and withdrawn liquid, wherein the discharge slurry has a solids concentration greater than the solids concentration of the slurry in the reactor;
- modulating the valve to adjust a flow rate of the discharge slurry to facilitate control of a pressure in the reactor;
- passing the discharge slurry from the reactor through a heated conduit to vaporize at least a majority of the liquid in the discharge slurry; and separating vapor from the heated discharge slurry via centrifugal forces.
- 29. (new) The process of claim 28, wherein separating vapor comprises passing the heated discharge slurry through a cyclone.
- 30. (new) The process of claim 29, comprising discharging the separated vapor from a top portion of the cyclone.

- 31. (new) The process of claim 29, comprising discharging a polymer stream comprising solid polymer particles and residual hydrocarbon from a bottom portion of the cyclone.
- 32. (new) The process of claim 31, comprising passing the polymer stream from the bottom portion of the cyclone to a purge column.
- 33. (new) The process of claim 31, comprising passing the polymer stream from the bottom portion of the cyclone to a low-pressure flash tank.
- 34. (new) The process of claim 31, comprising passing the polymer stream from the bottom portion of the cyclone to a fluff chamber.
- 35. (new) The process of claim 34, comprising passing the polymer stream from the fluff chamber to a purge column.